Case Report

JOMP
Journal of Oral Medicine and Pain

pISSN 2288-9272 eISSN 2383-8493
J Oral Med Pain 2015;40(2):79-81
http://dx.doi.org/10.14476/jomp.2015.40.2.79

Oral Hairy Leukoplakia in Patient with Human Immunodeficiency Virus Infection

Gunwoo Park, Hyung Joon Ahn, Jong-Hoon Choi, Jeong-Seung Kwon

Department of Orofacial Pain and Oral Medicine, Dental Hospital, Yonsei University College of Dentisty, Seoul, Korea

Received March 23, 2015
Revised April 1, 2015
Accepted April 17, 2015

Correspondence to:
Jeong-Seung Kwon
Department of Orofacial Pain and Oral Medicine, Dental Hospital, Yonsei University College of Dentistry, 50-1 Yonsei-ro, Seodaemun-gu, Seoul 120-752, Korea
Tel: +82-2-2228-3111
Fax: +82-2-393-5673
E-mail: jskwon@yuhs.ac

Oral hairy leukoplakia occurs on the lateral surface of the tongue that clinically as an asymptomatic white lesion. It is mainly found in patient with human immunodeficiency virus infection. However, it rarely outbreak immunosuppressed patients after organ transplantation, or the patients taking steroids or immunosuppressants. It is the result of proliferating Epstein-Barr virus in the oral epithelium. Most of human immunodeficiency virus infected patients with oral hairy leukoplakia are highly contagious and possible to progress acquired immunodeficiency syndrome. Therefore, the early diagnosis of oral hairy leukoplakia is very important. Taking a thorough history and human immunodeficiency virus screening test is highly recommended in case oral hairy leukoplakia is detected. In this case, a 29-year-old man presented with whitish lesion on lateral border of tongue is diagnosed as oral hairy leukoplakia and human immunodeficiency virus infection.

Key Words: Acquired immunodeficiency syndrome; Herpesvirus-4, human; HIV; Leukoplakia, hairy

INTRODUCTION

Oral hairy leukoplakia (OHL) typically occurs on the lateral surface of the tongue as a painless whitish plaque that is not removable by rubbing. OHL is known to be caused by Epstein-Barr virus (EBV; human herpesvirus-4) infection.[1-3] It is mainly found in patients infected with human immunodeficiency virus (HIV).[4]

In this case, a 29-year-old man with a lesion on the lateral borders of the tongue was screened and diagnosed with HIV infection.

CASE REPORT

A 29-year-old man presented with whitish lesion of tongue. The lesion developed 4 months ago. He had no history of systemic disease and had not taken any medication. He was healthy and a nonsmoker.

Clinical examination revealed whitish plaque with corrugated and hairy surface on the lateral border of tongue (Fig. 1). It was not tender when palpated and not removed by rubbing.

It was clinically diagnosed as OHL. In order to determine HIV infection, OraQuick ADVANCE rapid HIV-1/2 antibody test (OraSure Technologies, Bethlehem, PA, USA) was carried out. It showed a positive result. Then consultation to the division of infectious diseases was done for the definite diagnosis and treatment. For the treatment of intraoral lesion, acyclovir cream (Zovirax; Dong-A ST, Seoul, Korea) was topically applied.

After 1 week, it was not improved by topical application of acyclovir. Finally, he was diagnosed with HIV infection by serologic test. EBV antibodies were detected in the serum of the patient, and CD4+ T cell was significantly decreased (3/μL). After that, he had been receiving antiretroviral therapy.

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Fig. 1. Intraoral picture at the first visit. Whitish plaque with corrugated and hairy surface observed on the lateral border of tongue.

Table 1. Accuracy of OraQuick ADVANCE rapid HIV-1/2 antibody test[a]

Study	Sensitivity (%)	Specificity (%)
Reynolds and Muwonga[9]	98.6	98.9
Zachary et al.[10]	98.7	99.8
Delaney et al.[11]	99.1	99.6
Wesolowski et al.[12]	99.6	99.89

HIV, human immunodeficiency virus.
[a]OraSure Technologies.

DISCUSSION

OHL could be classed as an opportunistic disease by the EBV proliferating in keratinized epithelium of immunocompromised patients.[5,6] OHL has been also described in other immunocompromised individuals, including organ transplant recipients or the person undergoing steroid or immunosuppressive therapy.[4,5,7] But OHL in smokers and immunocompetent patients has been also reported.[8]

In clinical practice, it is important to differentiate the lesion which presents as whitish plaque from other oral lesion that may have a similar clinical appearance. The differential diagnosis of OHL should include candidiasis, lichen planus, leukoplakia, and squamous cell carcinoma. The diagnosis of OHL is not difficult because it is observed as a non-removable whitish lesion on the lateral border of the tongue. A simple chair-side screening tool, OraQuick ADVANCE rapid HIV-1/2 antibody test, is a point-of-care test to aid in the diagnosis of HIV infection with accuracy (Table 1).[9-12]

Treatment is seldom required since OHL is usually symptomless and self-limiting. There are few studies about the treatments for OHL.[5,13-15] It was reported that combination therapy of 25% podophyllin and 5% acyclovir cream is the most effective method to manage OHL.[6,16]

Most of HIV infected patients with OHL are highly contagious and possible to progress acquired immunodeficiency syndrome. The early diagnosis of HIV infection is critical since HIV can be transmitted from HIV-infected people who do not know their status to others. OHL may be an early indicator of undiagnosed HIV infection or prognostic indicator of immunocompromised status. Therefore, dentists should acquire the essential knowledge of OHL. Taking a thorough history and HIV screening test is highly recommended in case OHL is detected.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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